

Joint Meeting of CDWAC-WSAC

South Park Sewer Backup Protection

November 18, 2015

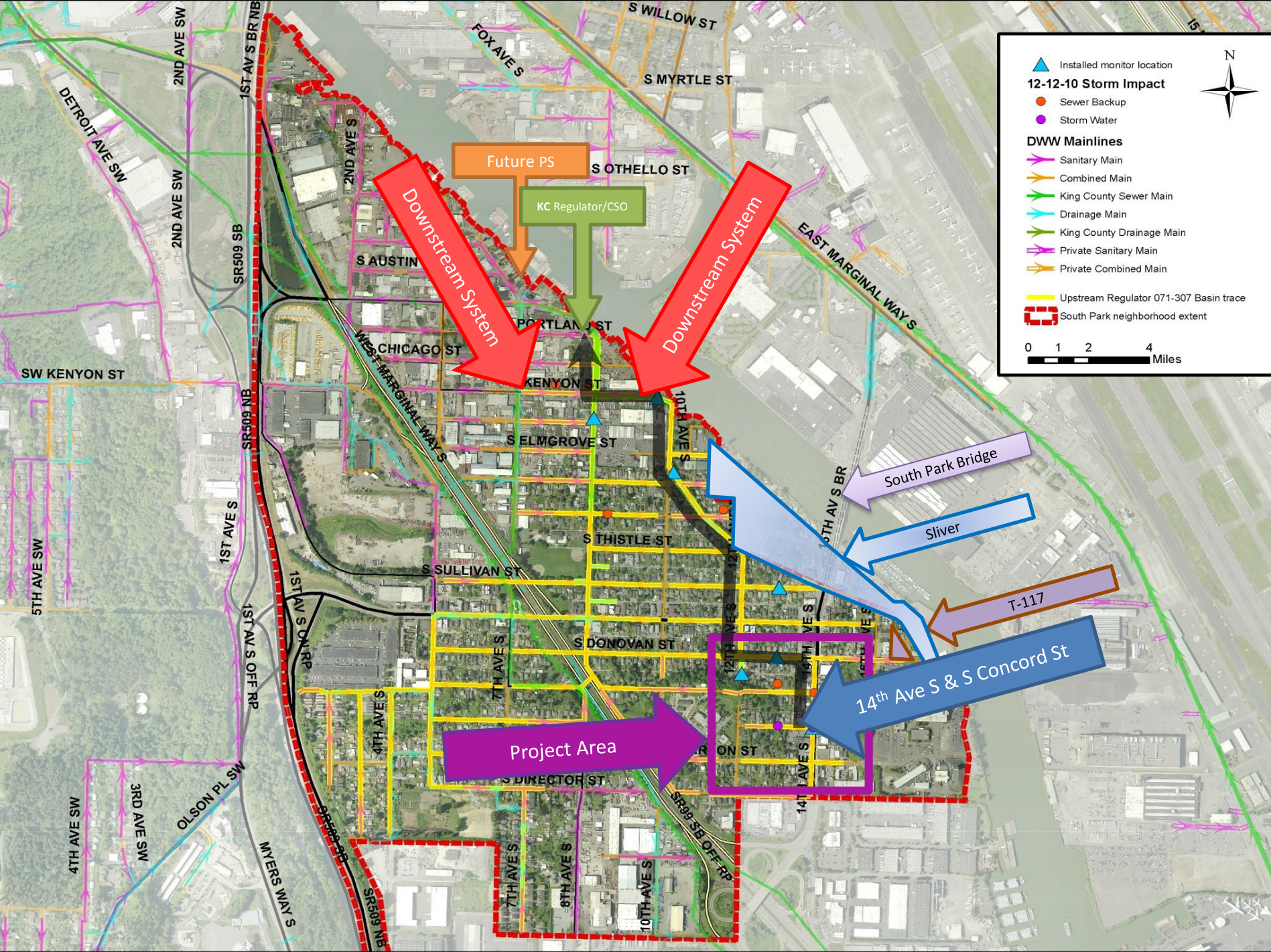
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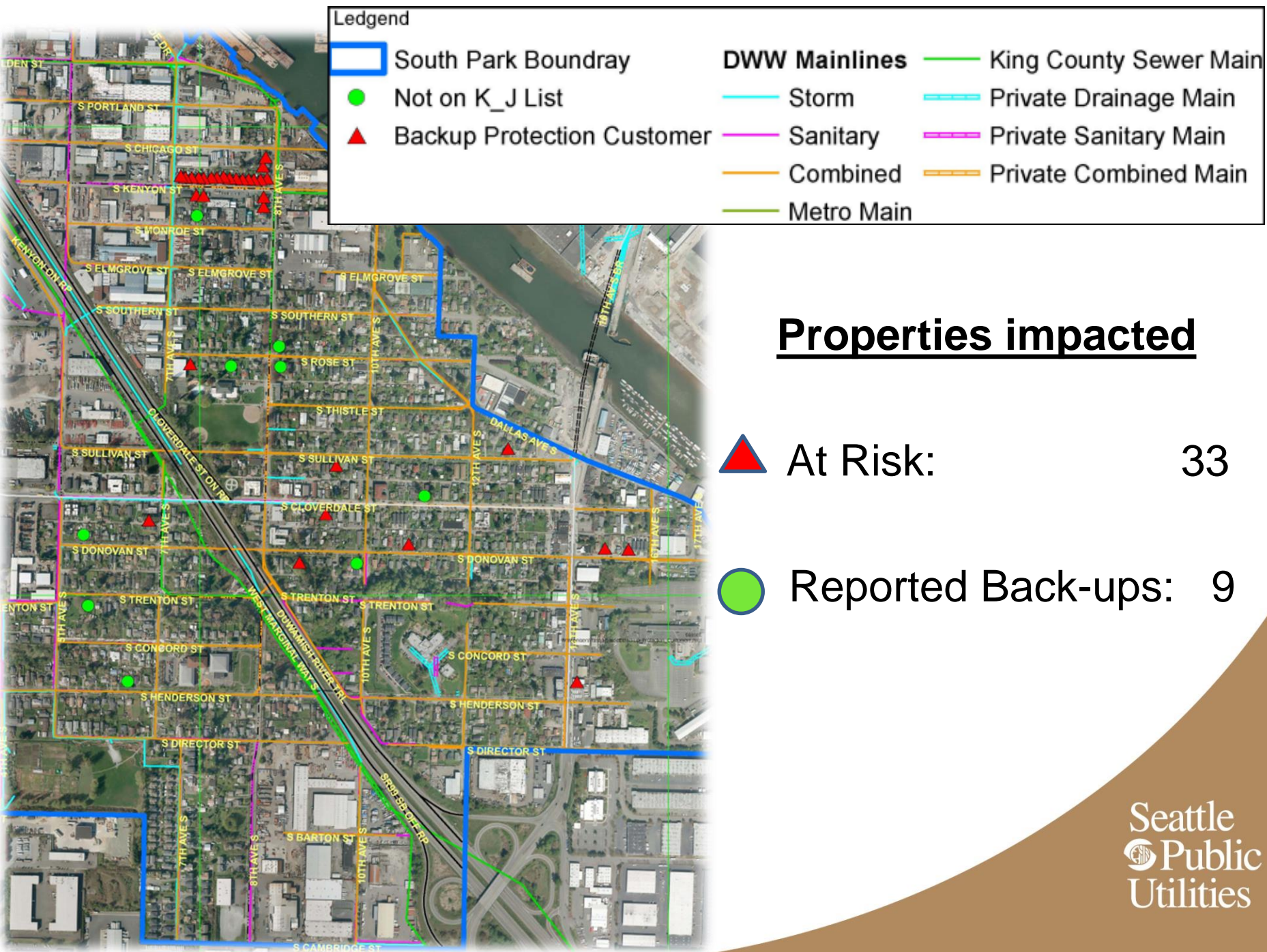
South Park

Sewer Backup Protection

- Background
- Protection Goals
- Protection Types & Options
- Options Analysis
- Practices
- Questions







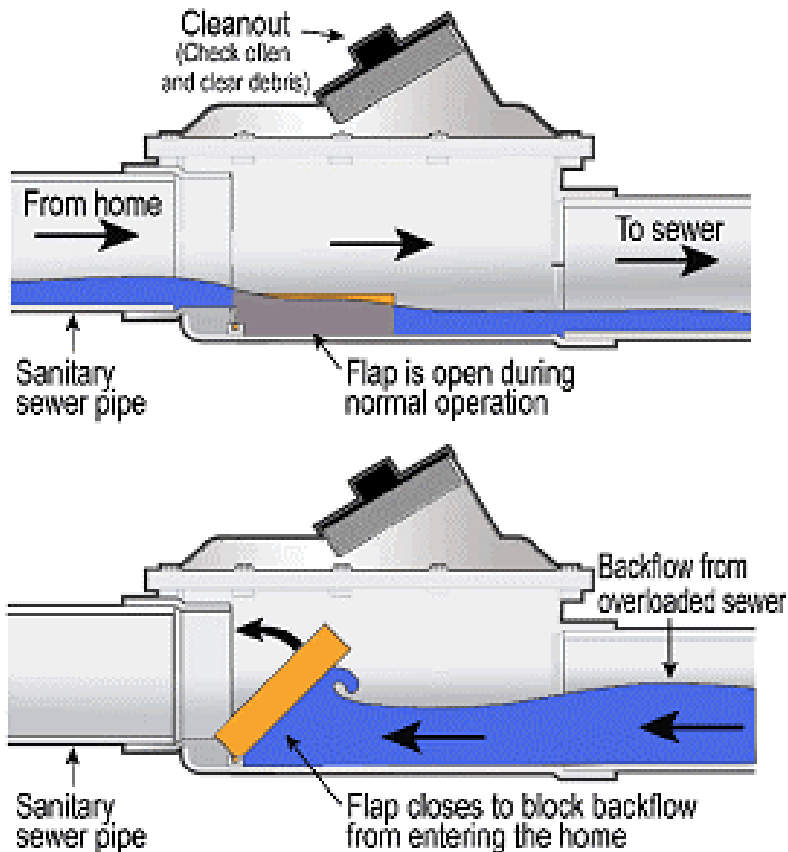
Protection Goals

- Protect Public Health
 - Prevent Sewer Backups
- Equitable Service Levels
 - During storm events and/or power outages
 - Protection against rodent intrusion
- Cost Effective Solutions
 - For the rate payers
 - For the homeowners
 - For the renters



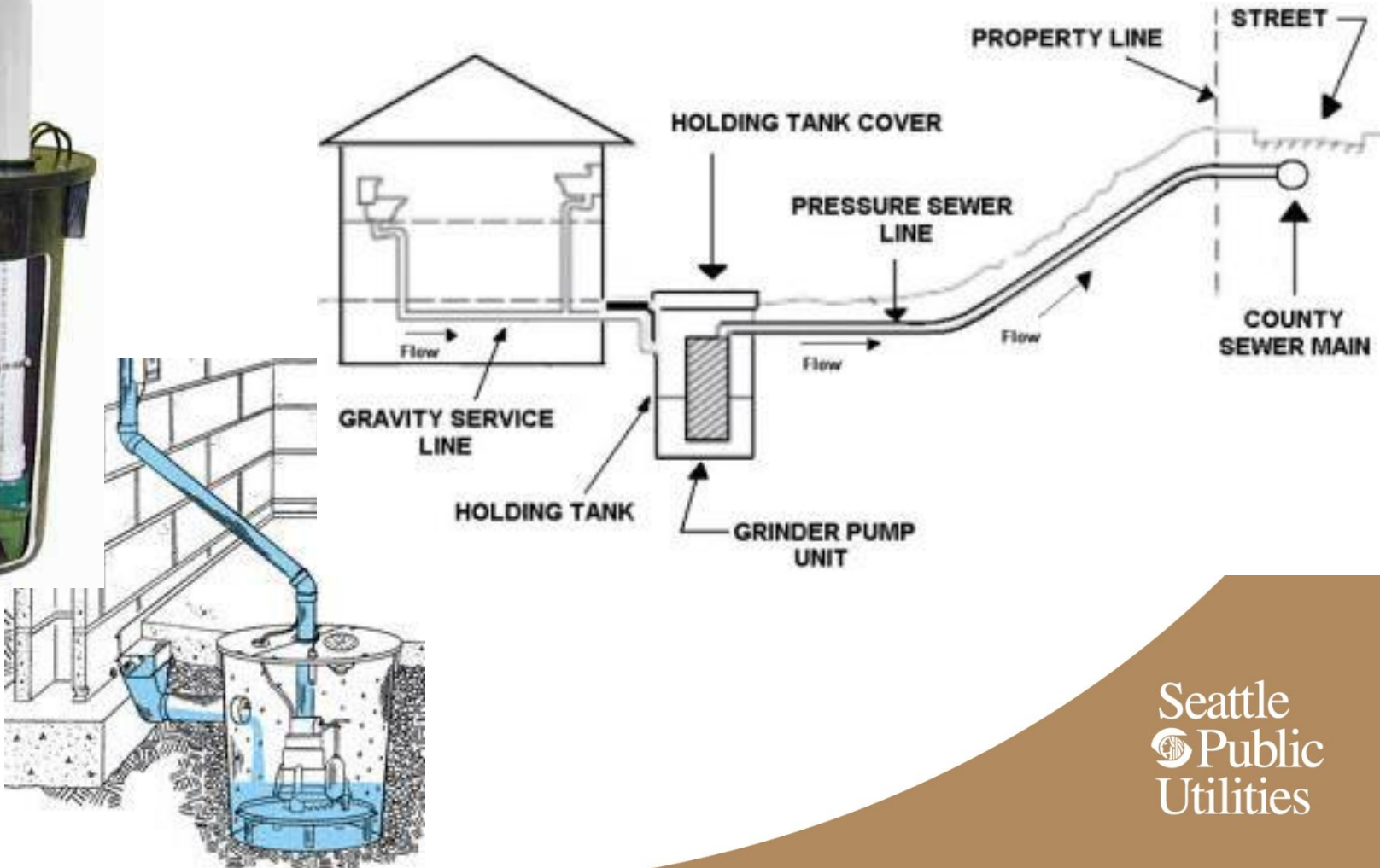
Protection Types

1. Backflow Protection or Backwater Valve



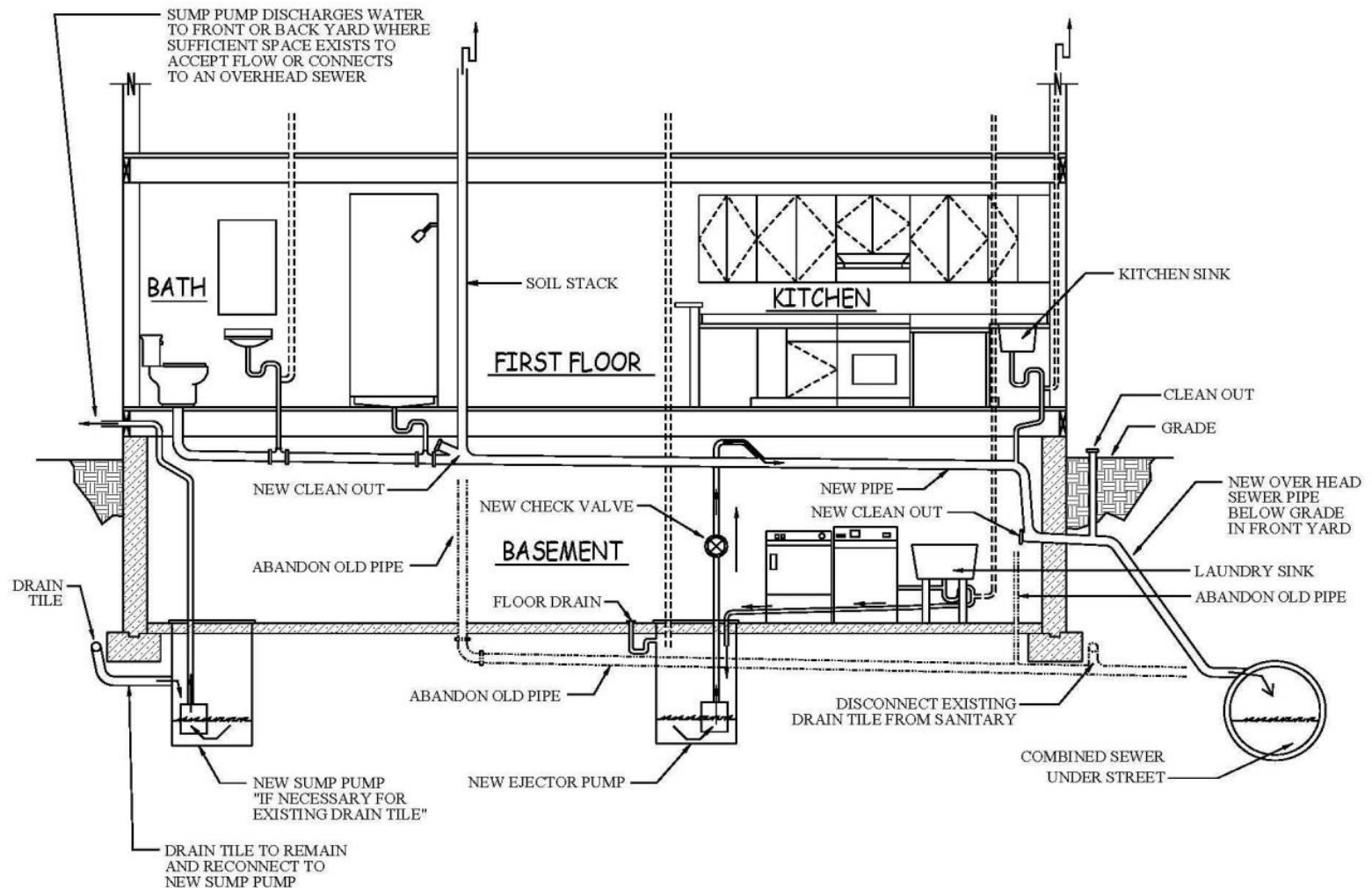
Protection Types

2. Grinder or Ejector Pump



Protection Types

3. Interior Pumping Modifications



Protection Types Analysis

ALTERNATIVE	SERVICE AVAILABILITY DURING STORM EVENTS	SERVICE AVAILABILITY DURING POWER OUTAGE	INSTALLATION COST	O&M Cost	REPLACEMENT COST	ALARM
Backflow protection or backwater valve	Limited by storm size	Yes	Low	L	L	No
Grinder/Ejector Pump	Yes	Limited	High	L	M	Yes
Interior Plumbing Modification	Yes	Limited	Varies	L	M	Yes

Protection Options

1. Do nothing
2. SPU installs or reimburses Owner
 - a. Backflow valve
 - b. Ejector pump
 - c. Internal plumbing modification
3. Installation on private property or public right-of-way
4. SPU owns and maintains or Owner owns and maintains

Protection Options Analysis

	Criteria	Description
SPU	Ease of Access	Minimizes need to access private property for maintenance, repair and replacement
	Ease of Administration	Minimizes cost of reeducation from turnover of resident and/or tenants
	Construction Risk	SPU installing allows SPU (who is paying) to better control construction risk
	Future Liability Risk	Minimizes chances for Future Liability Risk by having customer contractor responsible for install and customer for maintenance.
	Equity	Minimizes LOS inequity between program participants and other city residents.

Protection Options Analysis

	Criteria	Description
Customer	Social Equity Ability to Pay	The option is equitable across differing socio-economic classes as it minimizes customer effort. Eliminates need for to pay for device and get reimbursed
	Benefit from early installation (Inverse is Customer's Risk of Program Delay)	Minimizes delay of getting protection from backflow prevention. This refers to how easy the program is to set up, ease of customers to get installation in order to enjoy protection against winter storms.
	Level of Service from backflow prevention	Ability for homeowner to use plumbing during a storm.
	Backup Response Risk	Minimizes customers responsibility for backups as responsibility is with ownership & maintenance responsibility
	Response Risk	Ownership of asset allows customer to quickly call his own contractor rather than rely on SPU for response in an emergency.
	Construction Risk	Risk of finding Contaminated soil or damage to property/landscaping/side sewer from construction activity and having to pay for it.
	Share Side Sewer Risk	80% of 33 homes share a side sewer. Risk of disagreement between two customers who share side sewer about cost sharing or maintenance responsibilities causes valve not to be installed, delayed or for one to bear more than his fair share of cost
	Risk and impact of backup	Minimizes customers risk and consequence of backup. Min risk that lack of power or maintenance causes device to fail.

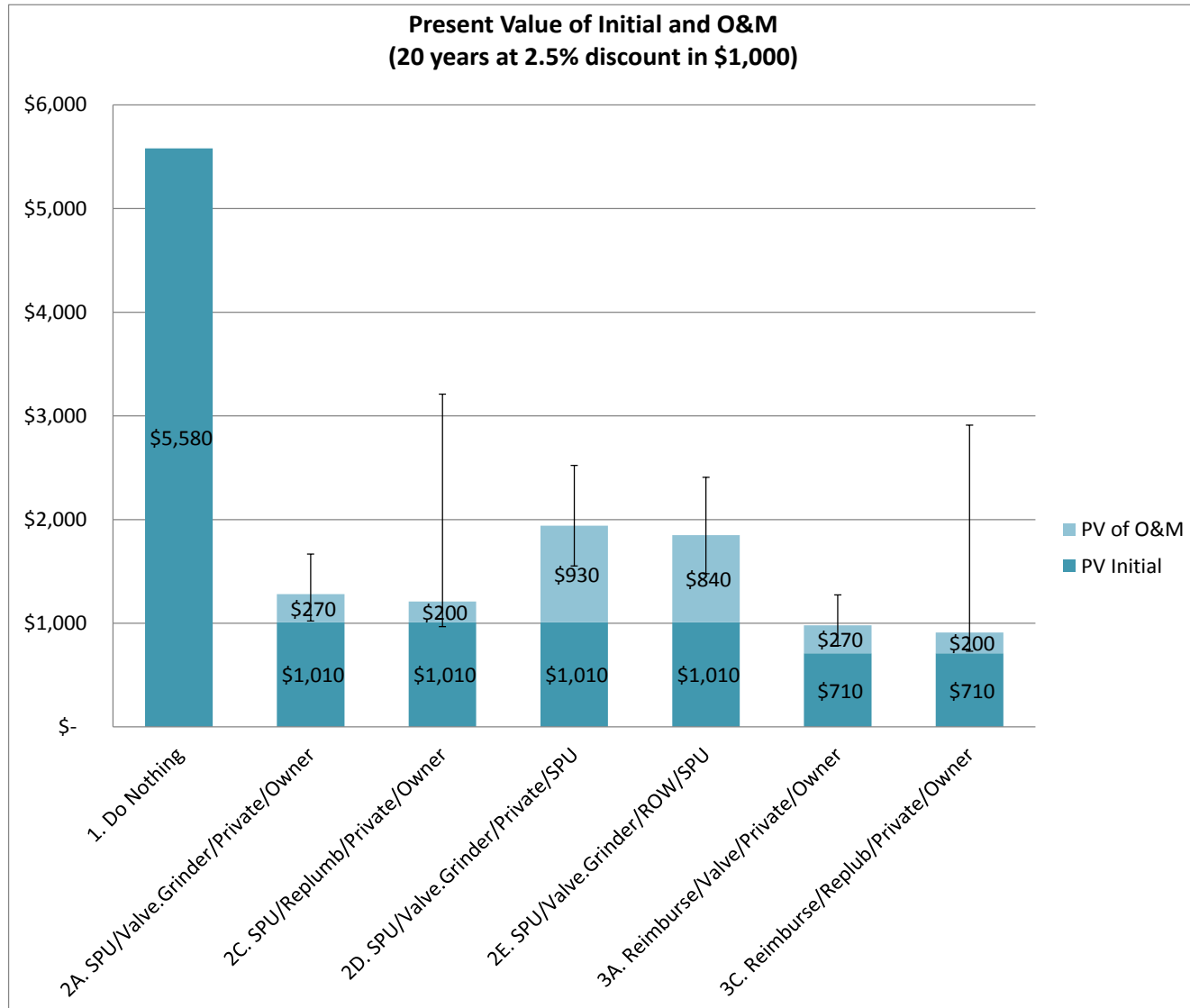
Protection Options Analysis

	DESCRIPTION*	OWNER	O&M & REPLACEMENT RESPONSIBILITY	LOCATION
1	Do Nothing			
2A	SPU installs backflow valve or ejector pump	Property Owner	Property Owner	Private Property
3A	SPU reimburses owner for installing backflow valve or ejector pump	Property Owner	Property Owner	Private Property
2D	SPU installs backflow valve or ejector pump	SPU	SPU	Private Property
2E	SPU installs backflow valve or ejector pump	SPU	SPU	Public R-O-W
2C	SPU modifies internal plumbing, includes ejector pump inside	Property Owner	Property Owner	Private Property
3C	SPU reimburses owner for modifying internal plumbing, includes ejector pump inside	Property Owner	Property Owner	Private Property

**Initially 17 Options Analyzed*

Protection Options Analysis

Installation and O&M Costs



Practices: SPU & Others

- SPU Pilot - reimbursement
- Tacoma, WA – assistance for valve installations through **loans**
- Portland, OR – **limited** reimbursement assistance
- Everett, WA – 2 tier program:
 - (1) full reimbursement for valves; followed by
 - (2) installing **publicly owned/maintained** valves in ROW
- Oak Park, IL – **partial** reimbursement
 - (1) interior plumbing modifications
 - (2) valve installation, or
 - (3) grinder pump installation
- Oklahoma City, OK – **assistance** in capacity constrained areas
- King County (DNRP) – provides valves to address **odor**

Questions

1. Should SPU provide sewer backflow protection?
2. Should SPU install or reimburse installation?
3. What level of service should SPU provide?
4. Who should maintain installation?

Protection Options Questions

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4. SPU owns and maintains or Owner owns and maintains